

FORCED IN, LEFT OUT: THE AIRBORNE DIVISION IN FUTURE FORCIBLE ENTRY OPERATIONS

**A MONOGRAPH
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Infantry**



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Abstract

FORCED IN, LEFT OUT: THE AIRBORNE DIVISION IN FUTURE FORCIBLE ENTRY OPERATIONS by Major William D. Wunderle, 39 pages.

Since April 1997, a strategically deployable, airdroppable light armored, direct fire system to support our early entry forces no longer exists. The decision to inactivate the 3-73 Armor Battalion and terminate the Armored Gun System has resulted in a shortfall in the capabilities of our rapid deployment contingency forces. While Army leaders acknowledge the requirement for an assault gun to support our early entry forces, they believe that the current and future organic anti-armor assets (IRC, Javelin, Apache, EFOGM, and LOSAT) within the 82 Airborne Division and the XVIII Airborne Corps mitigate the risk.

Reflecting concerns over the deficiency in the structure of our rapidly deployable contingency forces and the pace and direction of current and proposed solutions, this monograph attempts to answer the question: Can the Airborne Division conduct forcible entry contingency operations against a 21st Century threat? Additionally, the study examines the requirement to conduct forcible entry operations based on future threats; determines that light airdroppable armored systems are necessary for forcible entry operations; and lastly, evaluates the stop gap methods being used to offset the lost capabilities of the 3-73 Armor Battalion.

This Study concludes that there are significant shortfalls in the weapons capabilities of the Airborne Division. The time required to airland the IRC prevents it's integration into the ground tactical plan, and increases the time it takes critical assets from the Bravo echelon (Attack Aviation, MRLS, ADA, etc.) to airland. As anti-armor weapons, the Javelin, Apache, EFOGM, and LOSAT lack the highly mobile anti-armor, anti-material, and anti-personal capability to compliment the weapons systems found in infantry units and therefor provides limited support in the close dismounted infantry fight.

The XVIII Airborne Corps does not currently posses a weapons system or capability to compensate for the loss of an airdroppable light armor system. Based on contingency plans, these weapons may lack the quick deployability, mobility, firepower, shock effect, and survivability required by the Army to conduct forcible entry contingency operations. These shortfalls impact on the very ability of the Airborne Division to accomplish its purpose by limiting our force projection options and increasing the vulnerability of our contingency forces.

The requirement for a rapidly deployable, airdroppable assault gun is evident. If paratroopers are to conduct an airborne assault, establish and defend an airfield, they need additional organic direct fire support.

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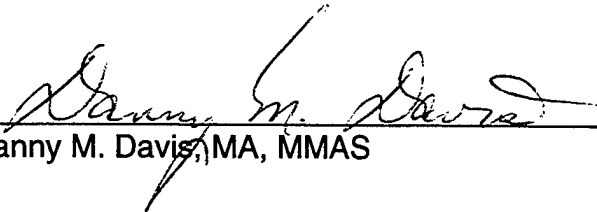
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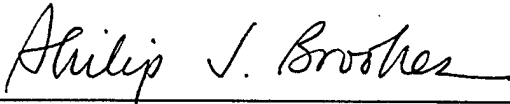
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Introduction

*"The year 1996 will be remembered as the time when both a currently deployed weapon system, the M551 Sheridan, and its replacement, the M8 AGS, were cut in the same year."*¹

Richard K. Fickett

The decision to terminate both the M-8 Armored Gun System (AGS) and to inactivate the 3rd Battalion, 73d Armor Regiment effectively stripped the Airborne Division of an airdroppable, light armor, direct fire system. The loss of this important capability may impact on the very ability of the Airborne Division to conduct forcible entry operations and secure a lodgement in order to build combat power for decisive operations.

Problem, Significance, and Background

Since April 1997, a strategically deployable, airdroppable light armored, direct fire system to support our early entry forces no longer exists. The Deputy Chief of Staff for Operations and Plans (DCSOPS) acknowledges that "there is a valid requirement for an assault gun in support of early entry forces." He believes the risk that ensues from the loss of the AGS and the 3-73 Armor is mitigated by current and future organic anti-armor assets within the 82 Airborne Division and the XVIII Airborne Corps.² Realizing this gap exists, the Chief of Staff, Army (CSA) General Reimer, directed the DSOPS to "work with [Forces Command] FORSCOM on this -[I] want them to demonstrate heavy package fly away capabilities with the 82d [Airborne Division]..."³ The resultant action was to task the 3d Infantry Division (Mechanized) at Fort Stewart, Georgia to provide an Immediate Ready Company (IRC) to the 82d Airborne Division. Like the 82d's

Division-Ready Brigade (DRB), the IRC is required to be deployable within eighteen hours of notification. There are three significant shortfalls to this solution:

First, neither the IRC's Abrams Tanks nor Bradley Fighting Vehicles can be airdropped into combat. Instead, an airfield first must be seized or controlled by friendly forces before the IRC can be landed.

Second, the time required to airland the IRC (up to twelve hours) prevents its immediate use in the ground tactical plan and delays the airland insertion of the Airborne Divisions Bravo echelon.⁴

Third, "... what happens when the 82d needs armor just to secure the airfield itself?"⁵

The shortfall in the structure and of our rapid deployable forces is significant. The decision to terminate both the AGS and to inactivate the 3rd Battalion, 73d Armor Regiment in the 82 Airborne Division may impact on the very ability of the Airborne Division to accomplish its purpose. And therefore creates a significant shortfall in the structure and capability of our rapidly deployable early entry forces.

Reflecting concern over the deficiencies in the structure of our rapidly deployable early entry forces and the pace and direction of current and proposed solutions, this monograph will determine if the Airborne Division can conduct forcible entry contingency operations against a 21st century threat? The secondary questions of the study are to identify why forcible entry operations are still required in future contingency operations. Determine why light airdroppable armored systems are necessary for forcible entry operations. Determine what current forcible entry capabilities exist. And lastly, what stop gap methods are being used to offset the lost capabilities of the 3-73 Armor

Battalion, and do these methods increase the vulnerability of our contingency forces and limit our forcible entry options?

Methodology

The National Security Strategy recognizes that many regional powers now have, or could rapidly procure formidable modernized forces, which could threaten U.S. interests. Chapter 1 provides an overview of potential future U.S. adversaries, outlines the force projection requirements stated in the National Military Strategy and determines that a rapid-deployment forcible entry capability is required to enable the force projection of U.S. military power as stated in the National Military Strategy.

Having established the requirement for a rapidly deployable forcible entry capability, Chapter 2 will analyze three historical examples of contingency operations, the Requirement Operational Capability for the AGS, and the doctrinally recognized need for a light armored system. This analysis will show that our contingency forces require a rapidly deployable, lethal, survivable and sustainable light armored system which provide both anti-tank and infantry assault gun functions.

Chapter 3 provides an overview of current U.S. joint forcible entry capabilities, and focuses on the mission requirements and capability shortfalls which exist in one of the most rapidly deployable units in the U.S. Army; the 82d Airborne Division.

Recognizing that a gap exists in forcible entry capabilities of the 82d Airborne Division, Chapter 4 provides an overview of the Army's responses to fill the void left in the Airborne Division by the decision to inactivate the 3-73rd Armor, and describes the shortfalls associated with each. Finally, Chapter 5 provides conclusions and recommendations derived from this study.

Chapter 1 - Forcible Entry Capabilities are a Future Requirement

*"These operations are intended to produce an immediate, decisive effect. In these circumstances, early entry forces seek to rapidly collapse the enemy's center of gravity, achieving the desired end-state of the operation simultaneously with deployment of forces."*⁶

TRADOC PAM 525-200-2

The fall of the Soviet Empire was perhaps the most de-stabilizing event of the 20th century. Since the opening of the Berlin wall, the U.S. Army has responded to more than nine contingencies, including Haiti, Somalia, Iraq, Kuwait, Central Africa, The Balkans, Korea, Liberia, and Ecuador. Regional conflicts, formerly kept in check by superpower rivalry and restraint have evolved into potentially dangerous confrontations. Many regional powers now have, or could rapidly procure formidable modernized forces, which could threaten U.S. interests. Projecting combat power requires a forcible entry capability that succeeds. If a lodgement cannot be established, then follow-on forces cannot be introduced into the theater. It is, therefore, imperative that our early entry forces be capable of fighting and winning in these contingencies.⁷

The Future Threat

With the end of the Cold War, regional disputes, formerly kept in check by superpower rivalry and restraint, have evolved into potentially dangerous confrontations. Many regional powers now have, or could rapidly procure, modernized armed forces, including the latest generation weapons systems. These regional powers could form coalitions among themselves to become a formidable force. Some are hostile to the U.S. and its friends and allies and are located in areas where they could threaten vital national interests. Although the Army has a global mission, it is largely based in the continental United States. There are no longer two monolithic threats arrayed against each other,

new threats continue to emerge in unexpected places. Therefore, there are few, if any, U.S. forces permanently positioned ashore in many of the areas that could emerge as threats to U.S. interests.⁸

Today, U.S. military forces face a wide range of global contingencies. The Army must remain organized and equipped to respond across the spectrum of operations, including conflicts that range from crudely equipped insurgents to a technologically advanced conventional force. Also included are military organizations of developing nations capable of fielding multi-battalion sized armored forces, with at least 105mm main gun equivalents and modern fire control systems.⁹

The proliferating market for military hardware has provided developing nations with an arsenal of armored vehicles from pre-World II M-4 Sherman tanks to modern Soviet T-72s. Even relatively obsolescent tanks have been upgraded to M1 and T-72 standards with a variety of retrofits, laser rangefinders, improved fire control systems, and enhanced armor protection.¹⁰ While not a match for the latest main battle tanks, these armored combat vehicles pose a significant threat to our early entry contingency forces.

As shown in figure one, many countries currently possess significant armored and mechanized capabilities. Regional totals include 80,000 tanks in Europe, 23,000 in Asia, 12,000 in the Middle East, 7,000 in Africa, and some 3,000 in Latin America. These totals include both modern and antiquated armor systems. These diverse weapons will likely be employed on regional battlefields of the future. Older tanks, anti-tank guided missiles (ATGM), and recoilless rifle systems are still deadly combinations against a light force without tank support and extensive anti-armor weapons.¹¹

Country	Active Army Forces	Main Battle Tanks	Total AIFV	Total Arty	Armed Helo's	SAM
China	2,200,000	8,500	4,500	14,500	135	Yes
United States	495,000	10,497	11,370	8,610	1,476	Yes
India	980,000	3,500	1,350	4,325	778	Yes
N. Korea	923,000	3,400	2,200	10,200	611	Yes
Iran	345,000	1,440	400	2,948	295	Yes
Syria	315,000	4,600	3,100	2,560	579	Yes
Iraq	350,000	2,700	900	2,100	120	Yes
Serbia	113,900	1,360	629	950	204	Yes
Cuba	85,000	1,500	400	1,040	130+	Unk
Sudan	85,000	250	462	1,004	60+	No
Libya	35,000	2,210	1,000	1,870	420	yes

AIFV – Armored/Infantry Vehicle Arty – Artillery and Multiple Rocket Launchers
SSM – Surface to Air Missiles

Figure 1: Selected Threat Capabilities. ¹²

At the tactical and operational level the real threat is not the geographic region of the world in which the U.S. military might have to fight, but rather the weapons systems and technologies that we will encounter. Third world nations are capable of countering U.S. armor capabilities through the use of improved antitank weapons systems, Global Positioning Systems, thermal sights and a host of other relatively low cost countermeasures.¹³

Strategic Requirements

Current U.S. Army considerations for contingency forces are derived from a variety of national defense policy sources, to include the President's National Security Strategy (NSS) and the Secretary of Defense's National Military Strategy (NMS). The current NSS, published in May 1997, highlights the complexity of the contemporary international security situation, explaining that:

We face dangers unprecedented in their complexity. Ethnic conflict and outlaw states threaten regional stability; terrorism, drugs, organized crime and the proliferation of weapons of mass destruction are global concerns that

transcend national borders; and environmental damage and rapid population growth undermine economic prosperity and political stability in many countries.¹⁴

A consistent theme throughout the NSS is the increased importance of "...our ability to deter potential adversaries..." This deterrence is based on the "...credibility of our warfighting capability, [and]...our rapidly deployable stateside based forces...[which must] maintain the flexibility to meet unknown future threats."¹⁵ Based on the NSS, the National Military Strategy describes the strategic environment, develops national military objectives, and describes the capabilities required to execute the strategy. The NMS elaborates on the military capabilities requirements presented in the NSS, explaining that "the ability to project tailored forces through rapid, strategic mobility gives national leaders ...increased options in response to potential crises and conflicts." Therefore, to comply with the NMS, the Army must possess the capability to rapidly and effectively deploy forces from "multiple dispersed locations...and if necessary, fight our way into a denied theater," by inserting "first to fight" forces that are both lethal and survivable.¹⁶

Force Projection Operations

Our CONUS-based power projection military must defend/secure global U.S. interests. Conducting force projection requires the Army to introduce credible, lethal forces early to send a clear signal of U.S. commitment, while "offsetting an adversary's advantages in mass or geographic proximity."¹⁷ Lessons learned from Operation Desert Shield shows that our first-to-arrive, lightly equipped contingency forces are vulnerable to a threat equipped with heavy armor. Our heavy forces, while survivable and lethal, require more time to move and are difficult to transport in a time-sensitive environment.

Previously, existing Army early entry capabilities focused on deterrence through deployment, with lethality, survivability, and sustainability to be built up over time. With the current unrest in the world, continuing regional disputes, and the U.S. responsibility to act in defense of national interests, the requirement to exercise forcible entry operations in response to future crises will likely increase.

Forcible Entry Operations

Force projection usually begins as a rapid response to a crisis where rapid, yet measured, response is critical. Forces that participate in force projection operations are referred to as early entry forces. Early entry operations are highly situational dependent and may occur across the range of military operations. Early entry operations can be categorized into three types: unopposed entry when no combat is taking place, unopposed entry under combat conditions, and forcible entry.¹⁸

In unopposed entry situations, when no combat is taking place the early entry force may be to serve as a deterrent, to act as the advanced detachment for a much larger deployment that will follow, or to participate in non-combat operations such as disaster relief or humanitarian assistance. In unopposed entry under combat conditions, the units deploy into the area of operations where combat is either underway or imminent. In this situation, the requisite ports and airfields are under friendly control. The final type of early operation is Forcible entry.¹⁹ Forcible entry is the riskiest type of early entry.

In many situations, forcible entry is the only method for gaining access into the operational area or for introducing decisive forces into the region. FM 100-5 describes forcible entry as an opposed entry requiring combat operations to secure a lodgement for the subsequent arrival of larger forces that will conduct decisive operation. "If the

circumstances are right, the entry and combat stages could combine in a *coup de main*, achieving the strategic objectives in a single major operation."²⁰ Forcible entry operations provide a swift and decisive means for seizing the strategic initiative, however, forcible entry generally requires rapid follow-up and exploitation by significant forces from the national strategic reserve for success in major efforts.²¹

It may perhaps be best described as a capability available for gaining access (lodgement) to an area of operations (AOs) where that access is being denied by an opposing force. Forcible entry applications include seizure of key locations (ports, airfields, sites for advanced bases, lines of communications and chokepoints); initial lodgements for major expeditions; envelopment's (vertical and horizontal) in a developing campaign; evacuation of forces or noncombatants; and a diversion or dispersion of enemy efforts.²²

A lesson from the Gulf war that will in all likelihood be learned by our future adversaries is that they must prevent U.S. forces from establishing a lodgement that would allow for a buildup of forces.

Simply put, in an era of sovereign borders and nationalistic forces, dissidents simply need to deny a strategic lodgement to their adversaries. There will not always be seaports like Dhahran or facilities like Howard Air Force Base through to build up combat power. Contingency operations will most likely require forcibly opening lodgement.²³

With the proliferation of arms around the world, the enemy will be fully modernized, capable of placing air, missile and artillery fires, and counterattacking with mechanized/armor forces against the airborne force. With these capabilities, the enemy could deny or delay the seizure of the airfield and destroy the airborne assault force that is not immediately reinforced to counter this threat.²⁴

Opposed forcible entry operations must be accomplished rapidly and coordinated with strategic airlift and sealift, and prepositioned forces. These operations demand a versatile mix of forces that are organized, trained, equipped, and poised to respond

quickly. Joint Force Commanders (JFCs) sequence, enable, and protect the arrival of forces to achieve early decisive advantage. “The projection of forces will often be a friendly center of gravity (COG) during early entry operations, and seizure of the airfield to establish lodgement is the decisive point. JFCs introduce forces in a manner that enables rapid force buildup into the structure required for anticipated operations and simultaneous protection of the force.”²⁵

Military forces today must be prepared for practically any contingency, from full-scale war, through counterinsurgency and international peacekeeping to local disaster relief. Our Army’s most important responsibility is to be ready to fight and win a full-scale war. A forcible entry capability is an essential first step in projecting the combat power required to fight and win. Therefore, these forces must have the following essential capabilities. First, our forces must be capable of forcing decision, that is, establishing the military conditions to achieve political objectives.²⁶ Second, our forces must be capable of quick, decisive victory. “Our nation [and our soldiers] demands high standards – quick victory and minimal loss of life. This requires application of overwhelming combat power that can totally dominate the adversary.”²⁷

Chapter 2 – Why Light Armor?

“Armor in the future must fly, just as all other means of war must fly. Possessing good cross country mobility, and gunned to destroy any earthbound vehicle, the tank will play the decisive role in the coming battles of the airheads.”²⁸

General James R. Gavin

According to General Gavin, the greatest weakness of the W.W.II airborne force was the lack of ground mobility and effective anti-tank weapons.²⁹ Fifty years later, this issue still remains unresolved.

Historical Examples

The U.S. Army has extensive historical experience in contingency operations, but until recently, the use of light armor in these contingency operations was limited.

Operation Just Cause, Operation Desert Shield, and Operation Uphold / Restore Democracy, saw the use of light armor, and provide good examples of the Army’s recent combat experience with light armor forces employed in early entry contingency operations.

Operation Just Cause

In December 1989, U.S. military forces successfully conducted a coup d’ main to neutralize the Panamanian Defense Forces (PDF) and overthrow the dictatorship of General Manuel Noriega. By the end of the first day of the invasion, the principal units of the PDF were destroyed or dispersed. Noriega was fleeing, unable to rally any resistance, and was replaced by Guillermo Endara as the Panamanian president.³⁰

During Just Cause, the Army’s only light armor system; the Sheridan provided overwhelming firepower in comparison to the assets of the PDF. Because of it’s compact design, lightweight and parachute deployability, the M-551 Sheridan is able to deploy

and maneuver where heavier vehicles would be restricted. The Sheridan demonstrated its ability to strategically deploy on two separate occasions. The first involved the airlanding of a platoon of four Sheridans with ammunition and support equipment on a single C-5 Galaxy into Howard AFB, Panama. The second involved a larger deployment of the ten Sheridans attached to 1st Brigade, 82d Airborne Division. This operation was history's first combat heavy drop of armored vehicles from six C-141 aircraft.³¹

As reflected in current doctrine, the Sheridans formed the nucleus of the brigade's firepower. Initial missions included blocking enemy counterattacks and supporting the infantry's simultaneous assault on four D-Day objectives. In subsequent combat operations, the Sheridans successfully performed the classic roles of armor / armored cavalry: reconnaissance, security, lethal fire support to dismounted forces, and shock effect.³² Armor use during Operation Just Cause showcased the Sheridan in a classic example of supporting infantry operations in a combined arms effort.

Sheridans were critical to fighting in built-up areas by providing direct fire support to infantry, including precision fires against reinforced concrete buildings. The 152 HEAT-T rounds penetrated reinforced concrete walls from six to ten inches thick.³³ In fact, the M-551 Sheridans were so important to success that they used every 152 HEAT-T round available, demonstrating the importance of a light armored vehicle in the rapid accomplishment of required missions.

Total Ammunition Expended

WEAPONS SYSTEM/AMMUNITION	ROUNDS EXPENDED
AH-64 APACHE	
Hellfire	7
2.75 Inch Rockets	78
M-551 Sheridan	
152mm HEAT	70
M-102 Howitzer	
105mm HE	2
81mm Mortar	
HE	10
ILLUM	24
60mm Mortar	
HE	54
ILLUM	40

Figure 2: Total Ammunition Expended.³⁴

During Operation Just Cause, the Sheridan demonstrated the unique capability of a light armored system, which has the ability to be delivered by parachute during the crucial airborne assault phase of a forced entry operation. This capability provided planners enormous flexibility – and gave the commander on the ground an enormous advantage.³⁵ It did not take long for U.S. strategic deployment capabilities to be tested again.

Operation Desert Shield

Clearly a contingency operation involving a significant enemy armor threat, Operation Desert Shield presented a legitimate requirement for the deployment of U.S. contingency forces. On 8 August 1990, the first American troops to arrive in Saudi Arabia were elements of the 82d Airborne Division, spearheaded by its entire Light Armor Battalion. However, the combat power of the 82d Airborne Division was no match for the over 4,000 Iraqi tanks arrayed along the Saudi border. In fact, the U.S.

assumed extreme risk with the deployment of the Airborne Division, for until August 14th, when the first of 33,000 Marines began to land, the 82d Airborne Division was the only U.S. ground combat force in the theater. This force projection vulnerability, and the risk assumed by the 82d Airborne Division prior to the arrival of U.S. Army heavy forces demonstrates the U.S. army's need for rapidly deployable light armor forces, if only for contingency force protection.³⁶ Operations in Haiti would provide yet another example of the need for an armored direct fire weapons system to support infantry operations.

Operation Restore/Uphold Democracy

On 13 October 1993, a 1,200 man United Nation peacekeeping force was turned away from Haiti by armed demonstrators. This force was to guarantee the safe return and peaceful transition back into power of Haiti's exiled President Aristide. A Catholic Priest, Father Jean-Bertrand Aristide was inaugurated as President of Haiti on 7 February 1991. After his inauguration, Aristide began transitioning Haitian politics into a democracy; something the Haitians have never had. These changes increasingly caused internal discontent and concern, especially with the Army who distrusted Aristide because he failed to nominate then Brigadier General Raoul Cedras as army commander-in-chief, and because Aristide created a specially trained presidential security force which the military feared would eventually replaced them. When the political situation continued to deteriorate, the military overthrew Aristide's government in a violent coup, led by Brigadier General Raoul Cedras on 30 September 1991. Following the intervention of the American, French, and Venezuelan ambassadors, Aristide was allowed to go into exile in the United States.³⁷

Since the coup, the Organization of American States (OAS) and the United Nations (UN) attempted to negotiate a settlement. On 3 July 1993, the Governor's Island Accord was signed with Aristide and LTG Cedras stating that: Aristide would return to Haiti, as President, on 30 October 1993, LTG Cedras and COL Michel Francois would resign, and amnesty would be provided for all participants in the coup. In order to guarantee Aristide's safety and peaceful transition, the United Nations sent a peacekeeping force to Haiti to help retain the police and the army. Unfortunately, neither side kept the terms of the agreement, and the UN peacekeeping force was turned back.³⁸ The failure of the Governor's Island Accord led to sanctions being reimposed by the UN, the restoration of the economic embargo, which ultimately led to thousands of people leaving Haiti, and flooding the U.S. coastline with Haitian refugees.

On 19 September 1994, over 3,100 paratroopers and nine Sheridans from the 82d Airborne Division in "a 30-mile-long wagon train of drop aircraft," would conduct a forcible entry to seize Port-au-Prince International Airport and begin to forcibly impose the conditions of the Governor's Island Accord. When LTG Cedras heard that the invasion force was enroute, he and his junta leaders told the U.S. delegation led by former President Jimmy Carter, and former Chairman of the Joint Chiefs of Staff retired General Colin Powell, that they would cede power to President Jean-Bertrand Aristide.³⁹

The invasion of Haiti would have marked the largest U.S. combat paratroop drop since Operation Market Garden in 1944, the World War II Allies' failed attempt to establish a foothold over the lower Rhine using one British and two U.S. airborne divisions.⁴⁰

This was to be an extraordinarily complex plan for the first 2 hours, there were 34 designated targets in Haiti, compared to 27 during Operation Just Cause. While the planners understood that the seizure of key facilities, especially Port-au-Prince

International Airport, and neutralizing the Haitian military, was required for mission success, a key lesson learned from Operation Just Cause was to plan for what was called “the morning after,” ... stability operations. In this situation, stability operations included the restoration of law and order, utility services, and preparation for Aristide's return.⁴¹

While the 82d Airborne Division planned to use the Sheridans as an initial quick reaction force, immediately following the forcible entry, division planners “really envisioned them coming into their own once the fighting died down.” The primary mission for the light armor was that of force presence and security. The Sheridans would be used in conjunction with the infantry and military police for crowd control and intimidation of any remaining Forces Armées d’Haïti, (known as FAd’H) elements following the invasion. “Why put a soldier out there who could have bottles and rocks thrown at him when you could put a Sheridan there? ... A Sheridan on every corner.”⁴²

Although the forcible entry was halted, due to the surrender of the Haitian military junta, elements from the division’s light armor battalion were later deployed to support the 10th Mountain Division (Light Infantry). The joint task force in Haiti used Sheridans for point security, convoy security, cordon search and seizure, and screening missions. Planning for the low-intensity Haitian operation reinforced lessons learned during high-intensity conflicts such as Operations Desert Shield and Desert Storm when Sheridans provided the initial U.S. armor presence in the region.⁴³

As the historical examples in this chapter illustrate, light armor vehicles, assault guns, and other direct fire weapons systems, have made significant contributions in

support of the Airborne Division not only in forcible entry operations, but also with the stability operations which ultimately follow.

Operational Requirements

The requirement for a versatile, readily deployable, yet lethal armor system to provide both anti-tank and infantry assault gun functions has existed in the Army since the early seventies. The requirement for a 20-ton, high survivability test vehicle-light (HSTV-L) funded by the Defense Advanced Research Projects Agency (DARPA) in 1972, has shifted focus almost as many times as it has changed names. The development of an armored / assault gun system continued through the mid-1980's with joint Army and Marine Corps participation.

Throughout these years, the evolution of the armored / assault gun system evolved from a High Mobility Multi-purpose Wheeled Vehicle (HMMWV) based system to a Light Armored Vehicle-25mm (LAV-25) system, and finally, to a tracked system. The Bradley Fighting Vehicle was considered, but rejected as a candidate because it was not C-130 air transportable. In 1987, the AGS was dropped from the Long-Range Research, Development and Acquisition Plan (LRRDAP) as unaffordable. With this decision, the Marine Corps continued with their own LAV-105 program. Finally, in 1989, after the Commander, XVIII Airborne Corps "highlighted the need for a replacement of the M551 Sheridan..." A DCSOPs directed the General Officer Steering Council (GOSC) held at Fort Knox "determined that there was in fact an Army requirement for an AGS." While earlier Requirement Operational Capabilities (ROCs) stressed the importance of air transportability, the leaders of the XVIII Airborne Corps and the 82d Airborne Division

insisted that the AGS "be capable of low-velocity airdrop insertion along with the initial assault forces to provide immediate direct fire support to the task force."⁴⁴

No strategically (C-141B/C-17) or tactically (C-130/C-17) deployable, direct fire weapons system existed to provide the contingency force commander a readily deployable, highly mobile anti-armor (kinetic energy), anti-material (chemical energy) and anti-personal capability to compliment those weapons systems found in infantry units.⁴⁵

In April 1990, the Army issued a validated ROC document. This ROC formally established the need for an AGS armed with a 105mm weapon capable of firing NATO-standard ammunition. The 1990 ROC outlined the following characteristics for the AGS: Deployability, Lethality, Survivability, and Sustainability.

Deployability: One configuration of at least one-battalion (70) vehicles capable of low-velocity airdrop from C-130, C-141, and C-17 aircraft. The system must be capable of fighting with all weapons systems within 15 minutes after derigging.⁴⁶

Lethality: The AGS should have a 105mm main gun capable of firing kinetic energy rounds. The system should mount a 7.62mm coaxial machine gun and a .50 caliber machine gun at the commander's station. The AGS must store approximately 30 main gun rounds. At least half of the 30 main gun rounds should be accessible for immediate loading. The fire control system should have an integrated laser range finder. Accuracy and target acquisition should provide a dual-stabilized fire-on-the-move capability for both the main gun and the coaxial machine gun. Night sights are required and both primary and auxiliary sights must retain boresight and zero following airdrop operations.⁴⁷

Survivability: The system must provide mobility / agility equal to or better than the M551A1. It must have a cruising range of at least 480km at 40km/hr, and be capable

of towing another AGS. There must be sufficient armor protection to ensure survivability against small arms and indirect artillery fire. The vehicle must also possess an add-on, modular armor capability to upgrade the level of protection. The vehicle must also possess an integrated crew NBC protective system.⁴⁸

Sustainability: The vehicle must possess a high degree of reliability. The ratio of maintenance man-hours per operating hours must be kept to a minimum. The system should seek commonality of parts with the M1, Bradley Fighting Vehicle and other existing systems. The vehicle should also accommodate Preplanned Product Improvements for a vehicular navigational aid system compatible with the Global Positioning System (GPS). It must accept current and planned radio and secure voice systems and incorporate an external telephone for communication with supported infantry troops.⁴⁹

Doctrinal Considerations

The U.S. Army's current light armored force doctrine, organization, and material clearly reflect the specific experiences of the 82d Airborne Division's Light Armored Battalion. Accordingly, current light armored doctrine focuses primarily on its employment for direct fire support to airborne infantry units by attaching an armor company with each combat brigade of the 82d Airborne Division.

The 1993 version of FM 100-5 Operations, the U.S. Army's current keystone doctrinal manual, provides a brief discussion on the uses of light armor, stating that:

Light armor units can participate in a variety of Army operations, including rapid worldwide deployment, throughout a wide range of environments. Tactical missions include providing security, reconnaissance, and anti-armor firepower to the light infantry or airborne division. Light armored units also conduct standard armor operations, including the destruction of enemy forces in coordination with other arms.⁵⁰

Reflecting the lessons of JUST CAUSE and DESERT STORM, current doctrine focuses on the employment of U.S. Army light armor units in contingency operations. FM 17-18, Light Armor Operations, retains primary focus on the operations of light armor units in support of light infantry units. Specifically, the manual states that light armor can use its unique capabilities to support light infantry forces for the execution of contingency plans, across the entire operational continuum.⁵¹ The requirement for “rapid strategic and tactical worldwide deployment” is highlighted, as is the need to operate in a variety of political, military, and geographic environments. The primary purpose of light armor is to operate with light infantry during rapid-deployment contingency operations.⁵²

Its tactical missions include providing security, reconnaissance, and anti-armor firepower to the light infantry division or airborne corps, as well as standard armor operations requiring “massed direct, heavy caliber firepower, mobility, and shock effect,” such as deliberate attack, movement to contact, hasty attack, counterattack by fire, limited penetrations, and exploitation.”⁵³

Additional missions may include: enhancing the mobility of dismounted infantry units, combat operations in urban environments, convoy security, mobile reserve, rear area operations, and Noncombatant Evacuation Operation (NEO) support. These missions may require rapid strategic and tactical deployment worldwide.⁵⁴

Chapter 3 - Current Forcible Entry Capabilities

*"The Armed Forces of the United States will never again poke as individual fingers; rather they will always strike as a closed fist."*⁵⁵

David E. Jeremiah

Forces currently available to execute forcible entry include Marine Corps and Navy Team amphibious or air assault forces, Army light, air assault, or airborne forces, special operations forces, or any combination thereof. Only by exploiting the combined capabilities of our Armed Forces can forcible entry operations be accomplished rapidly, decisively, and with minimal casualties.⁵⁶

Amphibious Operations

Naval Expeditionary Forces are routinely deployed to meet the JFCs requirements for forward presence in regions vital to our national interests. A Marine Expeditionary Unit (MEU) is a key component of this naval expeditionary force. A MEU can travel up to 500 miles per day to conduct amphibious forcible entry operations.⁵⁷

Air Assault Operations

Both the Army and the Marines have the ability to insert forces rapidly by helicopter during forcible entry operations. Although utility helicopters in combination with attack / anti-tank helicopters provide a highly mobile and lethal combination; the MEU has only a limited air assault capability (360 troops per lift), and the Army must operate from a secure landing strip or a Forward Operating Base (FOB).⁵⁸

Airborne Operations

To provide the CINC's with an immediate forcible entry capability, Army airborne units maintain battalion sized task forces on an 18-hour wheels up deployment status. These airborne forces deploy with 72-hours worth of provisions and normally

secure an airfield for follow-on airland operations. Once airland operations commence, a rapid build-up of firepower, mobility, and logistics can be achieved.⁵⁹

Employment Considerations

While all of the above forces are capable of conducting forcible entry operations either jointly or as a service, there are several operational challenges that determine which service or services can provide the most optimal force mix: Timing and tempo, the locations of and number of lodgements to be seized. And, the mobility, maneuverability, and sustainment of the forcible entry force.⁶⁰

Timing and tempo - Which forces can be deployed to the area of operations to meet the window of opportunity? For example, how long will it take the MEU to be within striking distance? Or, can the airborne force deploy with sufficient mass to maintain the tempo until follow-on forces arrive?⁶¹

The locations of and number of lodgements to be seized – Is the objective within the footprint of the MEU? Are there any available airfields or lodgements in the AO, which can be used as a FOB for air assault operation? What are the basing and overflight restrictions? And, does the mission require the seizure of multiple objectives?⁶²

The mobility, maneuverability, and sustainment of the forcible entry force – Does the forcible entry force have the agility to exploit success? Can the assault force expand the airhead and defend the lodgement to enable the airland of follow-on forces?⁶³

Although the intent is to use every joint resource available to impose our will on the enemy, this will not always be the case. In fact, “on the second day of the ground war in Operation Desert Storm – the day of the heaviest fighting for many units – adverse

weather conditions kept absolutely all the aircraft on the ground just when they were most needed.”⁶⁴

Because the Army must have the capability to conduct early entry operations with tailored forces that have the “characteristics of being more deployable, lethal, tactically mobile, survivable, and sustainable,” the 82d Airborne Division’s capabilities are critical in enabling not only the Army, but the Joint Force to accomplish its contingency requirements.⁶⁵

The 82d Airborne Division

“Deploys anywhere in the world, beginning within 18 hours of notification, execute parachute assaults, conducts combat operations, and wins.”

82d Airborne Division Mission

The United States is a power with worldwide responsibilities. Our National Security Strategy is built on the premise that the United States will be able to shape the international environment and create conditions favorable to U.S. and global security by pursuing diplomatic, informational, economic, and military instruments of national power. The National Security Strategy emphasizes that the military must be able to respond to the full spectrum of crises to protect our Nation’s vital interests. But, it is not possible to cover all possible contingencies. Therefore, the U.S. has sought to cover this gap by the retention of an airborne division. The 82d Airborne Division is considered part of the nation’s strategic reserve.⁶⁶

The primary mission of the airborne division is to deploy rapidly anywhere in the world and be prepared to conduct combat operations to protect U.S. national interests⁶⁷.

The 82d Airborne Division must be able to execute this mission during times of war or peace. Specific airborne division missions include:

1. Provide a show of force.
2. Seize and hold important objectives until linkup or withdrawal.
3. Seize an advance base to further deploy forces or to deny use of the base by the enemy.
4. Conduct raids.
5. Reinforce units beyond the immediate reach of land forces.
6. Reinforce threatened areas or open flanks.
7. Deny the enemy key terrain or routes.
8. Delay, disrupt, and reduce enemy forces.
9. Conduct economy of force operations to free heavier more tactically mobile units.
10. Exploit the effects of nuclear or chemical weapons.
11. Conduct operations in all four categories of low intensity conflict.
12. Support for insurgency and counterinsurgency.
13. Peacekeeping operations.
14. Peacetime contingency operations.
15. Combatting terrorism.⁶⁸

The scope of the 82d Airborne Division's responsibilities become apparent not only from the wide range of missions listed above, but also from the fact that the Division is currently troop listed against 16 regional OPLANs and CONPLANs. And of course there is the 17th plan, which states "be prepared to go anywhere, anytime, to do anything we are asked."⁶⁹

For military operations involving the 82d Airborne Division, the initial phase will most likely be a joint forcible entry operation to secure a lodgement in order to build combat power for decisive operations. Therefore, the Airborne Division may have to fight in order to gain, secure, and expand a lodgement prior to conducting decisive combat operations. The Airborne Division must possess the capabilities to deploy rapidly, enter the operational area, secure the lodgement and either immediately have decisive effect or create conditions for the arrival of substantial follow-on forces that then

conduct decisive operations. Airborne forcible entry forces will typically be the first U.S. forces to make contact with the enemy. During forced entry operations, lethality and security of the force is essential. Thus, the Airborne Division must consist of tailored, lethal and survivable forces, able to maintain a balanced posture, ready to respond to unforeseen events to support or carry out the Joint Force Commander's (JFC) operational intent.⁷⁰

To provide the CINCs with an immediate forced entry capability, Battalion Task Forces from the 82d Airborne Division's DRB-1 along with an Airforce Team are maintained on an 18 hour wheels up deployment status. This force, the Strategic Brigade Airdrop (SBA), provides a means for the warfighting CINCs to establish a lodgement. "It is the spearhead force, which seizes an airfield, the decisive point for the initial phase of the operation, to build combat power for decisive operations."⁷¹

In 1994 when a brutal civil war broke out in Rwanda, the Hutu's attempted to isolate the world from the conflict and hinder intervention by seizing "Rwanda's only major airport, openly stating that their goal was to block the West from sending airland relief forces and supplies...."⁷² In the future as well, it is unlikely that a potential enemy would allow the U.S. forces time to build combat power by attempting to deny or delay the seizure of the airfield to establish lodgement.

The key to an airborne operation is speed and surprise. Initially, the airborne force will rapidly seize the airfield through a combination of surprise, shock and firepower. This creates a window of opportunity to secure the airfield and receive follow-on airland combat, combat support, and combat service support forces and equipment essential to expanding the airhead and securing the lodgement.

Simultaneously, the enemy attempts to counter-attack by fire and maneuver to deny the airfield, prevent the airland operation and destroy the airborne force. Therefore, speed is essential.⁷³

The airborne assault force must be able to airdrop a combined arms team capable of seizing and immediately securing an airfield against a hostile force. However, key weapons systems essential for securing the lodgement and protecting the airfield and the force cannot be air dropped. The Bravo echelon provides the key combat, combat support and combat service support assets that are essential immediately after the airfield is seized to reinforce the assault force. Elements in the Bravo echelon include the Immediate Ready Company (IRC), Target Acquisition Systems, Multiple Launch Rocket System (MLRS), attack helicopters, Air Defense Artillery, and tailored logistics support. The IRC consists of four M1A1 Abrams tanks and four M2A2 Bradley Fighting Vehicles, a command and control element, and a support element. The Q-36 and Q-37 Radar Systems are required to locate and target mortar and artillery fire systems which can engage the airfield. The MLRS provides medium and long range artillery support. The Apache/Kiowa Warrior helicopters provide attack capability and eyes for the battlefield. The Patriot missile system protects the airfield against theater ballistic missile systems and enemy aircraft. Additionally, medical and emergency sustainment must be delivered along with the capability to aerial evacuate critical patients.⁷⁴

The Bravo echelon must be synchronized with the airborne force, enroute/inflight and awaiting the clearance of the airfield to immediately airland and exploit the initial success and build combat power for further expansion of the lodgement. It is essential these key airland assets and combat multipliers, depending on the enemy threat, begin to

land between P+2 to P+4 hours to provide ammo, medical and fuel support along with evacuating friendly casualties.⁷⁵

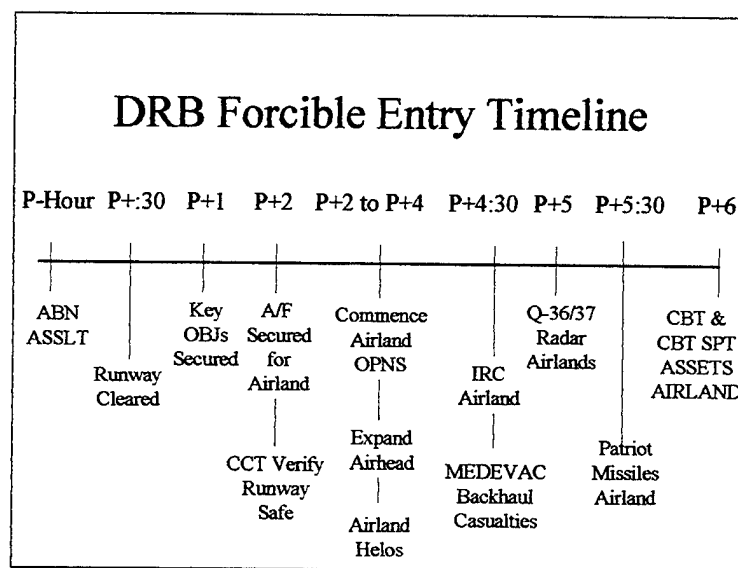


Figure 3: DRB Forcible Entry Timeline.⁷⁶

Any delay of the airland will surrender the initiative to the enemy, lose the shock value of the airborne assault momentum and the airfield, the decisive point of the operation. Because future forcible entry operations will most likely involve airfields that have a limited aircraft maximum on ground (MOG) capabilities and airfield support equipment, it is essential to have the ability to airdrop as much of the Airborne Division's combat power as possible. Any delay the buildup of insertion of combat power required by the assault force will impact on the airland of the Bravo echelon. The ability to rapidly introduce combat power onto an airfield directly impacts on the assault forces' ability to quickly seize initial assault objectives and secure the airhead.

During the planning phase for contingency operations in Haiti, XVIII Airborne Corps and 82d Airborne Division planners developed three courses of action to conduct a airborne assault, seize 40 assault objectives, and secure Port-au-Prince International

Airport. Course of Action One involved only the airlanding of assault forces, Course of Action Two was a combined airborne assault and airland, and Course of Action Three was an all-airborne assault option. The charts below depict the wargame results of the three courses of action in terms of force build-up rate, and objective seizure rate.

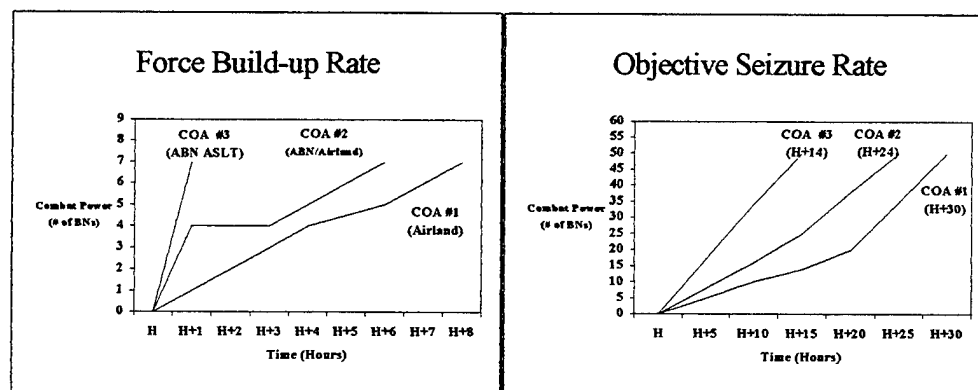


Figure 4: Force Build-up Rate and Objective Seizure Rate.⁷⁷

Each Course of Action wargamed the time it would take to insert seven infantry battalions on to the airfield (force build-up rate), then conduct assaults to seize 40 initial objectives (objective seizure rate). As shown in Figure 4, Course of Action three, the all-airborne assault option was the fastest, able to insert seven infantry battalions in about one hour, and seize the 40 assault objectives by H+ 14. Significantly faster than either the airland or the airborne assault / airland options.

If the enemy is able to counterattack prior to the seizure of the airfield, and airland of the BRAVO echelon, he can deny or interdict the airland and/or potentially isolate and destroy the assault force. Thus the enemy will be successful in preventing expansion of the lodgement and subsequent closure of follow-on forces required for decisive operations.⁷⁸

Chapter 4 - Bridging the Gap

"What we're looking at is phasing the Sheridan out and phasing something else in, [and] how we bridge that gap. But I am comfortable that we will be able to provide the 82d the required amount of fire power under any circumstances."

General Dennis Reimer

By signing the 15 August 1996 memorandum approving the inactivation of the 3-73 Armor (ABN), General Reimer also tasked FORSCOM to brief him within 60 days on the measures that would be taken to provide armored support to the 82d Airborne Division.⁷⁹ The resultant ways in which the Army hopes to compensate for the loss of the AGS include using the C-17 Globemaster III to quickly insert the Immediate Ready Company during contingency operations. Fielding the Javelin anti-tank missile, using attack aviation assets, and accelerating the development and fielding of the Enhanced Fiber-Optic Guided Missile and the Line-of Sight Antitank.⁸⁰

The Immediate Ready Company (IRC)

*"We felt that once we take the Sheridan out of the 82d, we could combine [the 82d] with ... [elements], from the 3d Infantry Division as a heavy package."*⁸¹

General Dennis Reimer

The IRC, designed to deploy into battle with the 82d Airborne Division, is a company-size task force from the 3d Infantry Division (Mechanized) located at Fort Stewart, Georgia. Its combat power consists of M1A1 Abrams tanks and M2A2 Bradley Fighting Vehicles. It also includes a command and control element, and a support element that has two fuel Heavy Expanded Mobility Tactical Trucks (HEMTTs), one cargo HEMTT and one ambulance. It deploys with five days of ammunition and sustainment supplies. Like the 82d's Airborne Division's DRB, the IRC is required to be loaded on aircraft and wheels up within 18 hours of notification.⁸²

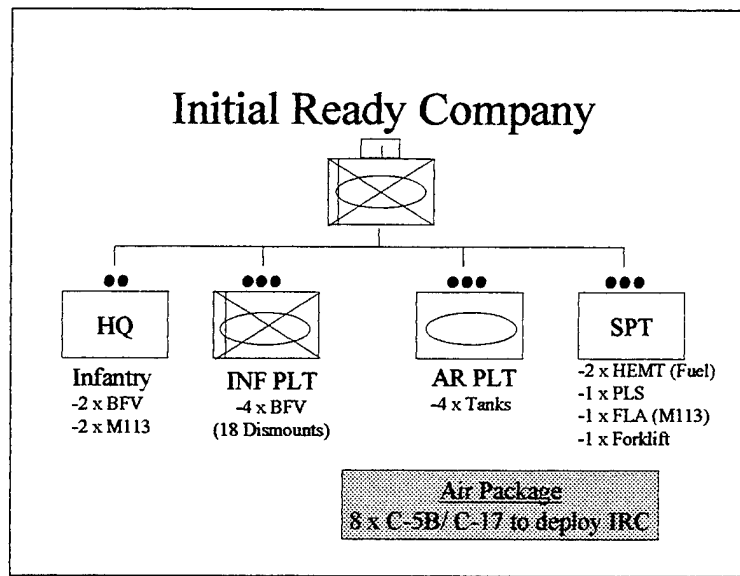


Figure 5: Initial Ready Company Composition.⁸³

On the surface the IRC's biggest drawback are obvious; neither the Abrams nor the Bradley can be airdropped into battle, therefore an airfield must be seized or controlled by friendly forces before the IRC can be landed. The IRC requires either eight C-5B Galaxy or eight C-17 aircraft to airlift it into a combat theater.⁸⁴ Secondly, the time required to airland the IRC prevents its immediate use on the battlefield and delays the airland insertion of the Airborne Divisions Bravo echelon.⁸⁵ And finally, the IRC does not answer the question "... what happens when the 82d needs armor just to secure the airfield itself?"⁸⁶

In response to the CSA's guidance and FORSCOM's decision to inactivate the of 3-73 Armor (ABN) by 15 July 1997, Corps and Division staffs began planning how to integrate the IRC and demonstrate the feasibility of a heavy fly away package to augment the Airborne Division during contingency operations. The concept called for the integration of the IRC through a sequenced program consisting of "crawl, walk, and run"

phases with the intent of "having an anti-armor / armor capability fully integrated into the DRB mission by April 1997."⁸⁷

The "crawl phase" began in November 1996 with 3rd Infantry Division Liaison Officers (LNOs) attending planning sessions with the 82d DRB, and then observing DRB airborne operations, which took place at Ft. Stewart, Georgia. The "walk" phase occurred in January 1997 with a DRB Emergency Deployment Readiness Exercise (EDRE). The concept included an airfield seizure tactical exercise without troops (TEWT) by the 82d DRB, and a subsequent link-up with the IRC on the airfield. The "run" phase used United States Atlantic Command's (USACOMs) JTFEX 97-2 to incorporate the IRC in a flyaway exercise to Ft. Bragg. This exercise took place in March 1997 commencing with a DRB Emergency Deployment Readiness Exercise (EDRE), an IRC fly away on 8 C-17s, and subsequent airland and link-up with the assault forces on the drop zone.

Lessons learned from the initial "crawl and walk" phases indicate that the DRB will be vulnerable to a mechanized threat due to the time required to integrate the IRC into the ground tactical plan. The specific issues include:

- The ground tactical commander has lost the freedom of movement and force protection to counter a credible armor threat during the initial hours of a forcible entry operation.
- The time required to airland the IRC, combat download from the aircraft, upload the IRC vehicles with fuel and ammunition, and integrate the IRC into the ground tactical plan. In a worse case scenario with an aircraft MOG of one, the IRC will not be fully integrated until P+12. This time will increase if other assets from the Bravo echelon (Attack Aviation, MRLS, ADA, etc.) are integrated earlier.
- Air Force restrictions on Class III (fuel), and Class V (ammunition) affect the sustainability of the IRC. An M-1 tank cannot be fully uploaded with Class V due to the C-17 ramp limitations. Currently, the Air Force requires fuel HEMTTs to deploy empty.

- Increased pass time of the Strategic Brigade Airdrop resulting from C-17 limitations.
- And finally, the extended closure time of the Bravo Echelon resulting from the integration of the IRC.⁸⁸

The Javelin Antitank Missile System

To offset the capabilities gap in the Airborne Division created by the loss of the light armor battalion, the Army accelerated the production and fielding of the Javelin, and the 82d began receiving the Javelin April 1997. The Javelin is a manportable, a fire-and-forget shoulder-launched antitank missile system designed to replace the light forces' Dragon anti-tank missile. This direct fire system should greatly improve the Airborne Division's paratrooper's ability to engage and destroy enemy tanks and other armored vehicles. Concerns over the Javelin include its weight, target engagement flexibility, and sustainability.⁸⁹

Although the Javelin is designed to defeat Soviet bloc equipment up to the T-72 tank, the system's weight, which is just under 50 lbs., may impact on its ability to be jumped on individual soldiers. The Javelin, is a fire-and-forget anti-armor missile with a maximum range of 2,000-meters. It's "fly-over, shoot-down" mode is not likely to be effective against logged bunkers and concrete emplacements shielding heavy machine guns and grenade launchers. Finally, the Javelin is not an infantry support weapon; it is an anti-armor missile system highly lethal against tanks with conventional and reactive armor. If Javelins were employed in the alternative direct-fire mode against these lower-priority targets, available missile supply could be quickly depleted.⁹⁰

Attack Aviation

Currently, the 82d Airborne Division has one attack helicopter battalion equipped with 24 OH-58D Kiowa Warrior armed scout helicopters. The inactivation of 3-73

Armor and the cancellation of the AGS have significantly weakened the 82d's ability to take on enemy tanks. To help offset this deficiency, LTG Keane, commander of the XVIII Airborne Corps has asked for a battalion of Apache attack helicopters as a way to offset the Airborne Divisions tank killing deficiency.⁹¹

There are both advantages and disadvantages to this proposed solution. Although the addition of 24 Apaches would give the 82d Airborne Division a significant anti-armor capability, the trade-off is that the division's attack battalion would be harder to deploy, a key concern, given the quick reaction requirements of the division.⁹²

The Kiowa Warrior is much lighter than the Apache, and its rotor blades fold, making it easier to load quickly inside a transport aircraft. Once unloaded from the aircraft, the Kiowa Warrior can be ready to fight within 20 minutes. In contrast, the Apache's rotor blades must be removed prior to loading, and reinstalling them to prepare the helicopter to fight takes between one and four hours per aircraft upon airlanding. It was this difficulty of deploying an Apache battalion quickly that was a principal factor in the Army's decision to remove Apaches from the 82d in 1993.⁹³

Currently, the XVIII Airborne Corps, has a brigade of AH-64 Apache's that can be used to support the 82d Airborne Division in a forcible entry contingency. The Apache's have the ability to self deploy to any theater. They don't have to be airdropped or airlanded. Self-deploying the Apaches directly into battle is not easy. "That's a very, not difficult, but delicate operation to orchestrate, but we can do it... We've demonstrated that... They can be there in conjunction with the attack."⁹⁴

Future Technologies

The continued development and subsequent fielding of the Enhanced Fiber-Optic-Guided Missile and the Line-of-Sight Antitank developmental systems are envisioned to offset the capabilities lost in the 82d Airborne Division through the inactivation of the 3-73 Armor and the AGS cancellation. Future successful demonstrations of these weapons systems will enable the Army to allocate sufficient resources and speed their procurement and add a lethal punch to XVIII Airborne Corps by the end of the Century.⁹⁵

The Enhanced Fiber-Optic-Guided Missile (EFOGM)

Mounted on a heavy HMMWV chassis, the EFOGM is uses a fiber optically guided missile system designed to destroy both tanks and helicopters at ranges up to 15 kilometers. The EFOGM is one of the weapons systems being evaluated in the Rapid Force Projection Initiative (RFPI) Advanced Concept Technology Demonstration (ACTD) scheduled to begin at Fort Benning, Georgia, in July 1998.⁹⁶

To better evaluate its potential, two EFOGM platoons consisting of four firing vehicles and one non-firing platoon leader vehicle each will be given to XVIII Airborne Corps to participate in the demonstration. At the conclusion of the demonstration in 1999, the Corps will receive another platoon to give it a full company's worth, for a two-year "extended user evaluation" of the weapon. Once the full company has been established, in late 1999, the unit will be considered deployable.⁹⁷

Although the EFOGM has the potential to provide excellent anti-armor and anti-helicopter capabilities up to 15 kilometers, it is yet untested, unfunded, and unfielded. Even if the EFOGM is resourced, fielded and deployable by the end of the Century,

without a digitized fire control system, the EFOGM's anti-bunker capability will be limited.⁹⁸

Line-of-Sight Antitank (LOSAT)

LOSAT consists of an armored chassis mounting a kinetic energy antitank missile launcher, that will overmatch and outrange current a projected threat armor systems.

Tests in the early 1990s showed the missile, which travels at around a mile per second, to be devastatingly effective against armored targets. The results of the initial testing conducted at White Sands Missile Range, N.M. in January 1996, are promising.

Currently, the technology demonstration program is focused on developing a LOSAT capability compatible with the HMMWV chassis, and air transportable on a C-130 aircraft. The LOSAT program technology demonstration phase is scheduled to be complete late in FY 98.⁹⁹

Although there are still technological hurdles that must be overcome, LOSAT appears to be a promising system. If its development is continued, it will be a very capable anti-armor system. "It's a lightweight system that I think would give all the combat power that the 82d, or any other force, would need... Nothing will be able to defeat it, except for a tank that maybe has three-foot-thick walls."¹⁰⁰

The LOSAT has three major drawbacks. First, the system is very expensive. Second, the Army only recently decided to produce LOSAT, meaning that it would be at least four or five years before the system was fielded with troops. Finally, the LOSAT is not a maneuver / assault system, it is "a single-function system... It's only a tank killer."¹⁰¹

Chapter 5 - Conclusion

*"We have a vulnerability that is being shortchanged and it is not alleviated by the IRC."*¹⁰²

Major General Joseph K. Kellogg

Operation Desert Shield/Storm exposed the vulnerabilities of our "first to arrive," lightly equipped contingency forces to a threat equipped with heavy armor. Our armored forces, while survivable and lethal, are heavy, large, and cumbersome to transport in a time sensitive environment. The Sheridan's successes proved that a lightweight, armored, direct-fire weapon is required to accompany the Airborne Infantry, beginning on the drop zone at P-Hour.¹⁰³ It is certain that potential future enemies closely observed recent operations involving the projection of U.S. military forces and in the future could seek to exploit US vulnerabilities, especially perceived inadequate early entry force lethality and survivability.

The United States Army now and in the future must have the capability to conduct early entry operations with tailored armored and light and contingency forces that are more deployable, lethal, survivable, and sustainable. "When we go into a forcible-entry operation, we do not want a fair fight. Why go in there with one brigade of paratroopers when we can go in with two brigades [and armor] and minimize casualties."¹⁰⁴

Despite the U.S. Army's extensive historical experience in contingency operations, until recently, the U.S. Army's combat experience with light armor forces is limited. This limited experience is due to a variety of factors to include actual mission requirements, available means for force deployment, and the limit availability of light armor units for contingency operations.¹⁰⁵

The Army leadership recognizes the need for a light armored system able to support our contingency forces, specifically the 82d Airborne Division, in a forcible entry operation. But, they feel the risk is mitigated, at least in the short term by the heavy package fly away capabilities provide by the 3d Infantry Division's Immediate Ready Company, and current and future organic anti-armor assets available within the 82 Airborne Division and the XVIII Airborne Corps.

Although the problem with the deployment and employment of the IRC was discussed in Chapter 4, another issue remains. The 3rd Infantry Division's responsibility to provide the 82d Airborne Division's DRB with a heavy IRC may conflict with other mandated requirements. In accordance with FORSCOM Regulation 525-5, Alert Force Requirements and Response Standards, the 3rd ID also has the responsibility to maintain a heavy IRC for potential heavy-division deployment contingencies. The heavy IRC is essentially "dual hatted" as the Heavy Division IRC and the Airborne Division IRC. With the potential competing requirements for the IRC, deployment of this unit with the 82d DRB will be evaluated against the requirements of all other possible contingencies. Similarly, the rapid nature of most contingency operations demands primary reliance on airlift for force deployment; diversion of this critical resource for an armored force deployment is justified only if the mission truly requires the immediate presence of a armored capability for force protection or mission accomplishment.¹⁰⁶ The end result is a low probability that the IRC will deploy for a typical contingency operation in support of the 82d Airborne Division.

The Javelin, Apache, EFOGM, and LOSAT represent current and future XVIII Airborne Corps assets and technologies with the potential to offset the loss of the 82d's light armor battalion.

The AH-64 Apache does provide a significant anti-tank / armor capability to support the infantry, but to become mission capable in the airhead upon airlanding, requires between one and four hours per aircraft to off-load. And, the EFOGM and LOSAT weapons system are anti-tank weapons currently in the research, development, and acquisition process. Based on test results, the earliest fielding of these systems will be is FY 99/00 and FY 03/04 respectively.

As anti-armor weapons, these systems lack the a highly mobile, anti-armor, anti-material, and anti-personal capability to compliment the weapons systems found in infantry units and therefore provide limited support in the close dismounted infantry fight. They offer no armor protection or a protected offensive capability against a force with armor. These systems are attrition based – with no maneuver capability. Decisive maneuver requires offensive action, and these solutions do not fill the gap.

The XVIII Airborne Corps does not currently posses a weapons system or capability to compensate for the loss of an airdroppable light armor system. Based on contingency plans, these stopgap measures lack the quick deployability, mobility, firepower, shock effect, and survivability required by the Army to conduct forcible entry contingency operations. "When Apache helicopters arrive, they are helpful. Effective anti-tank missiles for the infantry are essential, but in the long run a replacement for the... Sheridan may will serve the Army's strategic, operational, and tactical needs."¹⁰⁷ The 82d Airborne Division is particularly vulnerable.

The Army's decision to inactivate the 3-73rd Armor and not field the AGS has left our contingency forces without the light armor required to face these regional threats. The primary purpose for the AGS was to provide early entry forces with the capability to conduct an airborne assault with an offensive armored capability as well as the ability to provide immediate support to the infantry on the ground. What Armored Gun System provides is what airborne and light infantry divisions sorely lack – a tactically and operationally mobile direct-fire infantry support vehicle, packaged for quick air transport.¹⁰⁸ The requirement for a rapidly deployable, airdroppable assault gun is evident.

The requirement for a mobile, protected, parachutable, large-caliber assault gun remains. The AGS was never originally considered as a stand-alone anti-armor system, but as a combination anti-armor / armor system readily available to parachute with airborne infantry forces.¹⁰⁹

Therefore an operational needs statement for an air-droppable, large caliber, protected, direct fire weapons system able to operate with airborne forces is required. While outside the scope of this study, much research has been done which recommends adequate M551 Sheridan replacements and alternatives for the lost capabilities of the 3-73 Armor's Sheridans and the AGS.¹¹⁰ If paratroopers are to conduct an airborne assault, seize, establish and defend an airfield, as the first step in the introduction of a Joint Force, the Airborne Division requires an additional organic direct fire support system. This is not a shortfall just for the 82d Airborne Division – it is a shortfall for the Army – in meeting the National Military Strategy for the Joint Force. There is no shortage of options.

Endnotes

¹ Richard K. Fickett, "3-73 Armor: Down, But Not Out," Army Times, (October 1996), p. 62.

² Department of the Army, Office of the Deputy Chief of Staff for Operations and Plans, Memorandum for the Chief of Staff, Army, Subject: 3-73 Armor (ABN) Inactivation –ACTION MEMORANDUM, dated 15 August 1996.

³ Ibid.

⁴ Elements in the Bravo echelon include the Immediate Ready Company (IRC); Target Acquisition Systems, Multiple Launch Rocket System (MLRS), attack helicopters, Air Defense Artillery, and tailored logistics support.

⁵ Sean Naylor. "Domino Effect of the AGS Cancellation / May Trigger the Inactivation of the 82d's Tank Battalion and 'Heavying Up' of the 2d ACR," Army Times (18 March 1996).

⁶ U.S. Army Training and Doctrine Command, TRADOC PAM 525-200-2, Early Entry Lethality and Survivability Battle Dynamic Concept, (Fort Monroe, Virginia, 1 March 1994), p. 8.

⁷ Ibid., p. 3.

⁸ Secretary of the Army Togo D. West Jr. "America's Army Meets the New Millenium," and General Dennis J. Reimer. "Preparing Now to meet 21st-Century Challenges," Army: 1997-98 Green Book, (October 1997), pp. 13-28.

⁹ Ibid.

¹⁰ Carl H. Freeman. "The Army Needs a strategic Armored Gun System Now!" (U.S. Army War College, Carlisle Barracks, Pennsylvania, 1991), p. 4.

¹¹ John k Boles and Vincent C. Schmolli. "The Regional Threat," Armor, (July – August 1990), pp. 30-35.

¹² John Chipman. The Military Balance 1996/1997. (London: Oxford University Press, 1996), pp. 15-235.

¹³ U.S. Department of the Army, Light Armor Operations, Field Manual 17-18, (Washington, D.C.: March 1994), pp.1-6 to 1-7.

¹⁴ Office of the Secretary of Defense, National Security Strategy of the United States, (Washington DC: Government Printing Office, May 1997), p. 1.

¹⁵ Ibid., pp. 9-12.

¹⁶ Ibid., pp. 5-20.

¹⁷ Ibid., p. 20.

¹⁸ U.S. Army Training and Doctrine Command, TRADOC PAM 525-200-2, Early Entry Lethality and Survivability Battle Dynamic Concept, (Fort Monroe, Virginia, 1 March 1994), p. 5.

¹⁹ Ibid.

²⁰ U.S. Army, FM 100-5, Operations, (Washington, DC: Department of the Army, June 1993), p. 3-10.

²¹ National Defense University, AFSC PUB 1, The Joint Staff Officers Guide 1993, p. 7-6.

²² Colonel Stephen P. Kinder, "Forcible Entry Operations - A CINCs Trump Card," (the Naval War College, May 1994), p. 2.

²³ Anthony J. Tata, "A Fight for Lodgement: Future Joint Contingency Operations," Joint Forces Quarterly, Spring 96, P. 83.

²⁴ Department of the Army, Headquarters, XVIII Airborne Corps and Fort Bragg, Memorandum for the DA DCSOPS, ATTN: DAMO-ZA, Subject: Operational Risk Analysis/Vulnerabilities in Delaying the Division Ready Brigade-Medium BRAVO Echelon Airland, dated 28 September 1995.

²⁵ U.S. Army Training and Doctrine Command, TRADOC PAM 525-200-2, Early Entry Lethality and Survivability Battle Dynamic Concept, (Fort Monroe, Virginia, 1 March 1994), p. 1.

²⁶ Office of the Chairman, Joint Chiefs of Staff. "National Military Strategy of the United States," (Washington, DC: Government Printing Office, September 1997), p. 20.

²⁷ Colonel Don Elder, Force Projection and Combined Arms," Armor, Nov-Dec 1993, p. 18.

²⁸ James M. Gavin. "The future of Armor," Armored Cavalry Journal, (March-April 1947), p. 142.

²⁹ James R. Lunsford. "Keeping the Airborne Division a Viable Force." (Command and General Staff College, 1993), p. 15.

³⁰ Kenneth O. McCreedy. "Winning the Peace: Post Conflict Operations." (School of Advanced Military Studies, December 1994), p. 22.

³¹ Frank Sherman. "Operation Just Cause: The Armor-Infantry Team in the Close Fight." Armor, (September-October 1996), p. 35.

³² Carl H. Freeman. "The Army Needs a Strategic Armored Gun System Now!" (U.S. Army War College, Carlisle Barracks, Pennsylvania, 1991), p. 1.

³³ Kevin J. Hammond and Frank Sherman. "Sheridans in Panama." Armor, (March-April 1990), p. 14.

³⁴ 82d Airborne Division, Slide Presentation, "OPERATION JUST CAUSE: 82d Airborne Division, 20 Dec 89 – 12 Jan 90," 25 January 1990, p. 30.

³⁵ Frank Sherman. "Operation Just Cause: The Armor-Infantry Team in the Close Fight." Armor, (September-October 1996), p. 35.

³⁶ LTC Carl H. Freeman. "The Army Needs a Strategic Armored Gun System – Now!" USAWC Military Studies Program Paper, U.S. Army War College, (April 1991), p. 2.

³⁷ L.K. Burgess. "Haiti Handbook." Director, Marine Corps Intelligence Agency, Detachment Quantico, (1 November 1993), pp. 2-1 through 2-9.

³⁸ L.K. Burgess. "Haiti Handbook." Director, Marine Corps Intelligence Agency, Detachment Quantico, (1 November 1993), pp. 2-1 through 2-9.

³⁹ Sean D. Naylor. "The Invasion that Never Was." Army Times, (February 26, 1996), p. 2.

⁴⁰ Ibid., p. 1.

⁴¹ Ibid., p. 8.

⁴² Ibid., p. 9.

⁴³ Scott R. Gourley. "M8 Armored Gun System." Army, (January 1996), p. 38.

⁴⁴ LTC Carl H. Freeman. "The Army Needs a Strategic Armored Gun System – Now!" USAWC Military Studies Program Paper, U.S. Army War College, (April 1991), pp. 11-16.

⁴⁵ Ibid., pp. 16-17.

⁴⁶ Ibid., p. 17.

⁴⁷ Ibid., pp. 17-18

⁴⁸ Ibid., p. 18.

⁴⁹ Ibid.

⁵⁰ U.S. Army, FM 100-5, Operations, (Washington, DC: Department of the Army, June 1993), p. 2-23.

⁵¹ Major James W. Shufelt. "Mobile Firepower for Contingency Operations: Emerging Concepts for U.S. Army Light Armor Forces." Advanced Military Studies Program Monograph, U.S. Army Command and General Staff College, (February 1994), p. 12.

⁵² U.S. Army, FM 17-18, Light Armor Operations, (Washington, DC: Department of the Army, June 1993), p. 1-1.

⁵³ Major James W. Shufelt. "Mobile Firepower for Contingency Operations: Emerging Concepts for U.S. Army Light Armor Forces." Advanced Military Studies Program Monograph, U.S. Army Command and General Staff College, (February 1994), p. 13.

⁵⁴ U.S. Army, FM 17-18, Light Armor Operations, (Washington, DC: Department of the Army, June 1993), p. 1-2.

⁵⁵ David E. Jeremiah, "What's Ahead for the Armed Forces," Joint Forces Quarterly, summer 93, Inaugural Issue, P. 30.

⁵⁶ Anthony J. Tata, "A Fight for Lodgement: Future Joint Contingency Operations," Joint Forces Quarterly, Spring 96, P. 83.

⁵⁷ Colonel Stephen P. Kinder, "Forcible Entry Operations - A CINCs Trump Card," (the Naval War College, May 1994), pp. 4-5.

⁵⁸ Ibid., p. 7-8.

⁵⁹ Ibid., p. 6-7.

⁶⁰ Ibid., pp. 13-14.

⁶¹ Ibid.

⁶² Ibid.

⁶³ Ibid.

⁶⁴ Colonel Don Elder, Force Projection and Combined Arms," Armor, Nov-Dec 1993, p. 19.

⁶⁵ U.S. Army, FM 100-5, Operations, (Washington, DC: Department of the Army, June 1993), p. 2-23.

⁶⁶ Major John F. W. Caldwell. "Forced Entry: Does the Current Airborne Division Still Retain This Capability Under the Light Infantry Tables of Organization and Equipment?" Advanced Military Studies Program Monograph, U.S. Army Command and General Staff College, (January 1987), p.1.

⁶⁷ U.S. Army, FM 90-26, Airborne Operations, (Washington, DC: Department of the Army, December 1990), p. 1-4.

⁶⁸ Ibid., p. 1-5.

⁶⁹ 82d Airborne Division, Slide Presentation, "How We Fight," 1993, p. 2.

⁷⁰ U.S. Army, FM 100-5, Operations, (Washington, DC: Department of the Army, June 1993), p. 3-10. U.S. Army Training and Doctrine Command, TRADOC PAM 525-200-2, Early Entry Lethality and Survivability Battle Dynamic Concept, (Fort Monroe, Virginia, 1 March 1994), p.7.

⁷¹ Department of the Army, Headquarters, XVIII Airborne Corps and Fort Bragg, Memorandum for the DA DCSOPS, ATTN: DAMO-ZA, Subject: Operational Risk Analysis/Vulnerabilities in Delaying the Division Ready Brigade-Medium BRAVO Echelon Airland, dated 28 September 1995.

⁷² Anthony J. Tata. "A Fight for Lodgement: Future Joint Contingency Operations," Joint Forces Quarterly, Spring 96, P. 82.

⁷³ Department of the Army, Headquarters, XVIII Airborne Corps and Fort Bragg, Memorandum for the DA DCSOPS, ATTN: DAMO-ZA, Subject: Operational Risk

Analysis/Vulnerabilities in Delaying the Division Ready Brigade-Medium BRAVO Echelon Airland, dated 28 September 1995.

⁷⁴ Ibid.

⁷⁵ Ibid.

⁷⁶ Ibid.

⁷⁷ 82d Airborne Division working papers "IRC Integration." These papers were compiled by the G3 Plans Officer with input from Division's Battle Management Cell (BMC), as a source of the history, planning and lessons learned, from the integration of the 3d Infantry Division's IRC into the 82ds DRB for contingency operations.

⁷⁸ Department of the Army, Headquarters, XVIII Airborne Corps and Fort Bragg, Memorandum for the DA DCSOPS, ATTN: DAMO-ZA, Subject: Operational Risk Analysis/Vulnerabilities in Delaying the Division Ready Brigade-Medium BRAVO Echelon Airland, dated 28 September 1995.

⁷⁹ Department of the Army, Office of the Deputy Chief of Staff for Operations and Plans, Memorandum for the Chief of Staff, Army, Subject: 3-73 Armor (ABN) Inactivation -ACTION MEMORANDUM, dated 15 August 1996.

⁸⁰ Sean D. Naylor. "Goodbye, Sheridan / What's Next as 82d Loses Only Tank Battalion," Army Times, (23 October 1996), p. 2.

⁸¹ General Dennis Reimer in an interview with Sean D. Naylor. Quoted in "Goodbye, Sheridan / What's Next as 82d Loses Only Tank Battalion," Army Times, (23 October 1996), p. 3.

⁸² Sean D. Naylor. "Goodbye, Sheridan / What's Next as 82d Loses Only Tank Battalion," Army Times, (23 October 1996), p. 2.

⁸³ 82d Airborne Division working papers "IRC Integration." These papers were compiled by the G3 Plans Officer with input from Division's Battle Management Cell (BMC), as a source of the history, planning and lessons learned, from the integration of the 3d Infantry Division's IRC into the 82ds DRB for contingency operations.

⁸⁴ Richard K. Fickett. "3-73 Armor: Down, But Not Out." Army Times, (21 October 1996), p. 62.

⁸⁵ Elements in the Bravo echelon include the Immediate Ready Company (IRC); Target Acquisition Systems, Multiple Launch Rocket System (MLRS), attack helicopters, Air Defense Artillery, and tailored logistics support.

⁸⁶ Sean D. Naylor. "Domino Effect of the AGS Cancellation / May Trigger the Inactivation of the 82d's Tank Battalion and 'Heavying Up' of the 2d ACR," Army Times (18 March 1996).

⁸⁷ Major Grigsby and Major Stauffer, Plans Officers, 82d Airborne Division, "Information Paper" to LTG Keane, Commander XVIII Airborne Corps, 16 January 1997. The purpose of the paper was "to provide LTG Keane with information on the integration of an anti-armor / armor capability into the 82d Abn Division Ready Brigade (DRB) mission."

⁸⁸ 82d Airborne Division working papers "IRC Integration." These papers were compiled by the G3 Plans Officer with input from Division's Battle Management Cell (BMC), as a source of the history, planning and lessons learned, from the integration of the 3d Infantry Division's IRC into the 82ds DRB for contingency operations.

⁸⁹ Office of the Assistant Secretary of the Army for Research Development and Acquisition (RDA). "Army Weaponry, Equipment and New Technologies." Army: 1997-98 Green Book, (October 1997), pp. 261-262.

⁹⁰ Richard K. Fickett. "3-73 Armor: Down, But Not Out." Army Times, (21 October 1996), p. 62.

⁹¹ Sean D. Naylor. "Apaches Sought to Bolster 82d Airborne," Army Times, (1 April 1996).

⁹² Ibid.

⁹³ Ibid.

⁹⁴ Sean D. Naylor. "Goodbye, Sheridan / What's Next as 82d Loses Only Tank Battalion," Army Times, (23 October 1996), p. 3.

⁹⁵ Ibid., p. 4.

⁹⁶ Office of the Assistant Secretary of the Army for Research Development and Acquisition (RDA). "Army Weaponry, Equipment and New Technologies." Army: 1997-98 Green Book, (October 1997), p. 270.

⁹⁷ Sean D. Naylor. "Goodbye, Sheridan / What's Next as 82d Loses Only Tank Battalion," Army Times, (23 October 1996), p. 4.

⁹⁸ Richard K. Fickett. "3-73 Armor: Down, But Not Out." Army Times, (21 October 1996), p. 62.

⁹⁹ Office of the Assistant Secretary of the Army for Research Development and Acquisition (RDA). "Army Weaponry, Equipment and New Technologies." Army: 1997-98 Green Book, (October 1997), pp. 268-269.

¹⁰⁰ Sean D. Naylor. "Goodbye, Sheridan / What's Next as 82d Loses Only Tank Battalion," Army Times, (23 October 1996), p. 5.

¹⁰¹ Ibid.

¹⁰² 82d Airborne Division working papers "IRC Integration." These papers were compiled by the G3 Plans Officer with input from Division's Battle Management Cell (BMC), as a source of the history, planning and lessons learned, from the integration of the 3d Infantry Division's IRC into the 82ds DRB for contingency operations.

¹⁰³ Frank Sherman. "Operation Just Cause: The Armor-Infantry Team in the Close Fight." Armor, (September-October 1996), p. 34.

¹⁰⁴ LTC Gordon Bonham, XVIII Airborne Corps director of plans, quoted by Sean D. Naylor. "The Invasion that Never Was." Army Times, (February 26, 1996), p. 9.

¹⁰⁵ Major James W. Shufelt. "Mobile Firepower for Contingency Operations: Emerging Concepts for U.S. Army Light Armor Forces." Advanced Military Studies Program Monograph, U.S. Army Command and General Staff College, (February 1994), p. 10.

¹⁰⁶ Ibid., pp. 9-10.

¹⁰⁷ Major Burdett K. Thompson. "Where's the Light Armor? Enhancing the Firepower of Early Entry Forces," Advanced Military Studies Program Monograph, U.S. Army Command and General Staff College, (December 1996), p. 4.

¹⁰⁸ Ibid.

¹⁰⁹ MG Joseph K. Kellogg, in a draft letter to LTG John M. Keane, Commander, XVIII Airborne Corps and Fort Bragg, dated 21 January 1997, in the 82d Airborne Division working papers "IRC Integration."

¹¹⁰ These studies include Major Burdett K. Thompson's. "Where's the Light Armor? Enhancing the Firepower of Early Entry Forces," Advanced Military Studies Program Monograph, U.S. Army Command and General Staff College, (December 1996), and LTC Carl H. Freeman's. "The Army Needs a Strategic Armored Gun System - Now!" USAWC Military Studies Program Paper, U.S. Army War College, (April 1991). Additionally The RAND Corporation, in conjunction with TRADOCs Rapid Force

Projection Initiative has conducted several studies specifically, Steep, R., J. Matsumura, T. Covington, T. Herbert, and S. Eisenhard, "Rapid Force Projection: Exploring New Technology Concepts for Light Airborne Forces," Santa Monica, Calif.: RAND, DB-168-A / OSD, 1996. And, Steep, R., J. Matsumura, T. Covington, T. Herbert, S. Eisenhard, and L. Melody "Rapid Force Projection Technologies: A Quick-Look Analysis of Advanced Light Indirect Fire Systems," Santa Monica, Calif.: RAND, DB-169-A / OSD, 1996.

Bibliography

Books

- Blechman, Durch, Graham, Henshaw, Reed, Utgoff, Wolfe, Caleb. The American Military in the Twenty-First Century. New York, NY St. Martins Press, 1993.
- Bellamy, Chris. The Future of Land Warfare. New York, NY, St. Martins Press, 1987.
- Chipman, John. The Military Balance: 1996-1997. London: Oxford University Press, 1996.
- Cordier, Sherwood, S. U.S. Military Power and Rapid Deployment Requirements in the 1980s. Bolder, Colorado, Westview Press, 1983.
- Donnelly, Thomas, Roth, Margaret, and Baker, Caleb. Operation Just Cause: The Storming of Panama. New York: Lexington Books, 1991.
- Haass, Richard N. Intervention: The Use of American Military Force in the Post-Cold War World. Washington, DC: Carnegie Endowment for International Peace, 1994.
- Halberstadt, Hans. Airborne: Assault From the Sky. Novato, CA: Presidio Press, 1988.
- Keegan, John. The Face of Battle. New York: Penguin Books, 1976.
- Macgregor, Douglas A. Breaking the Phalanx: A New Design for Landpower in the 21st Century. Connecticut: Praeger Publishers, 1997.
- Mazarr, Michael J. Light Forces and the Future of U.S. Military Strategy. London: Brassey's Inc., 1990.

Thesis, Monographs & Reports

- Bonham, Major Gordon C. "Airfield Seizure: The Modern "Key to the Country"." Fort Leavenworth, KS: School of Advanced Military Studies, 1990.
- Brooks, Major Johnny W. "Army Contingency Forces: What Should They Be?" Fort Leavenworth, KS: School of Advanced Military Studies, June 1992.
- Caldwell, Major John F. W. "Forced Entry: Does the Current Airborne Division Still Retain its Capability under the Light Infantry Tables of Organizational Equipment." Fort Leavenworth, KS: School of Advanced Military Studies, 1987.

- Freeman, Carl H. "The Army Needs a Strategic Armored Gun System – Now!" Carlisle Barracks, PA: U.S. Army War College, April 1991.
- Henchmen, Major Michael L. "Establishment of a Permanent Joint Task Force Headquarters: An Analysis of Sourcing a Command and Control Structure Capable of Executing Forced Entry Contingency Operations." Fort Leavenworth, KS: Command and General Staff College, June 1993.
- Johnson, Major Harry E. "The Role of United States Based Contingency Forces in Operations to Restore Order." Fort Leavenworth, KS: School of Advanced Military Studies, 1991.
- Kazmierski, Major Michael J. "United States Power Projection in the 21st Century: The Conventional Airborne Forces must be Modernized to meet the Army's Strategic Force Requirements and the Nations Future Threats." Fort Leavenworth, KS: Command and General Staff College, June 1990.
- Kinder, Stephen P. "Forcible Entry Operations – A CINC's Trump Card." New Port, R.I.: Naval War College, 10 May 1994.
- Kula, Major Thomas W. "Simultaneous Operations: The Airborne Force has a Major Role, But is it Capable?" Fort Leavenworth, KS: School of Advanced Military Studies, 1994.
- Lunsford, Major James R. "Keeping the Airborne Division a Viable Force." Fort Leavenworth, KS: Command and General Staff College, June 1993.
- Montgomery, Major Paul J. "Force Selection for Obtaining a Lodgement in a MOOTW Environment." Fort Leavenworth, KS: School of Advanced Military Studies, 1996.
- Mornston, Captain (P) Harry E. "The Emerging National Military Strategy of Power Projection and the Army's Contingency Corps." Fort Leavenworth, KS: Command and General Staff College, 1991.
- Nicholson, Major John W. "America's Middleweight Force: Enhancing the Versatility of the 82d Airborne Division for the 21st Century." Fort Leavenworth, KS: School of Advanced Military Studies, December 1993.
- Rodriguez, Major Joseph O. "David and Goliath: Can Airborne Infantry Defend Against Armor in Central Europe?" Fort Leavenworth, KS: School of Advanced Military Studies, 1986.
- Shufelt, Major James W. "Mobile Firepower for Contingency Operations: Emerging Concepts for Army Light Armor Forces." Fort Leavenworth, KS: School of Advanced Military Studies, February 1993.

Steep, Randall, John Matsumara, Terry Covington, Thomas Herbert and Scott Eisenhard, and Laura Melody. "Rapid Force Projection Technologies: A Quick-Look Analysis of Advanced Light Indirect Fire Systems." RAND Corporation, 1996.

Steep, Randall, John Matsumara, Terry Covington, Thomas Herbert and Scott Eisenhard. "Rapid Force Projection: Exploring New Technology Concepts for Light Airborne Forces." RAND Corporation, 1996.

Tata, Major Anthony J. "The Airborne Force Role Operational Maneuver," Fort Leavenworth, KS: School of Advanced Military Studies, 1993.

Thompson, Major Burdett K. "Where's the Light Armor? Enhancing the Firepower of Early Entry Forces." Fort Leavenworth, KS: School of Advanced Military Studies, 1996.

Waller, Major Thomas G. "Bolt from the Sky: The Operational Employment of Airborne Forces." Fort Leavenworth, KS: School of Advanced Military Studies, 1986.

Periodicals & Articles

Elder, Colonel Donald. "Force Projection and Combined Arms." Armor, (November – December 1993), pp.17-20.

Fickett, Richard K. "3-73 Armor: Down, But Not Out." Army Times, (October 1996), p. 62.

Mazarr, Michael. "Middleweight Forces." Military Review, August 1991.

Naylor, Sean D. "After 30 Years, Sheridan Tank Nears Career End," Army Times (23 August 1996).

_____. "Apaches Sought to Bolster 82d Airborne," Army Times (1 April 1996).

_____. "Army Trades off AGS System for Cash / Kills Plan to Beef up Quick-Reaction Forces to Pay Personnel Bills." Army Times (5 February 1996), p. 3.

_____. "C-17 Considered in Lieu of AGS," Army Times (25 March 1996).

_____. "Domino Effect of the AGS Cancellation / May Trigger the Inactivation of the 82d's Tank Battalion and 'Heavying Up' of the 2d ACR," Army Times (18 March 1996).

_____. "Goodbye Sheridan: What's Next as the 82d Loses Only Tank Battalion?" Army Times (9 September 1996), pp. 14-16.

- _____. "The Invasion that Never Was." Army Times (26 February 1996).
- _____. "The Javelin Missile: A Lethal Ace up the Sleeve," Army Times (28 April 1997).
- _____. "The 2d ACR's Future is in Doubt – Again / Doubts Circle 2d ACR Future," Army Times (5 October 1995).
- Office of the Assistant Secretary of the Army for Research Development and Acquisition (RDA). "Army Weaponry, Equipment and New Technologies." Army: 1997-98 Green Book, (October 1997), pp. 261-262.
- Oliveri, Frank. "Army's AGS Program to be Axed / Service Unable to Finance Billion Dollar Project, other Possibilities Examined," Army Times (2 February 1996).
- Rozman, LTC Tom. "Making Light Forces More Flexible and Responsive." Armor (January-February 1996), pp. 18-20.
- Segal, David. "Whatever Happened to Rapid Deployment?" Armed Forces Journal International (March 1991), pp. 39-40.
- Tata, Lieutenant Colonel Anthony J. "A Fight for Lodgement: Future Joint Contingency Operations." Joint Forces Quarterly, (Spring 1996), pp. 82-89.
- Turbiville, Dr. Graham H. "Soviet Airborne Assault." Marine Corps Gazette, October 1987, pp. 52-53.
- Ware, Colonel Fletcher K. "The Airborne Division and a Strategic Concept," Military Review (March 1976), p. 23-33.

Military References and Publications

- Office of the Chairman, Joint Chiefs of Staff. National Military Strategy of the United States. Washington, DC: Government Printing Office, May 1997.
- Office of the Secretary of Defense. A National Security Strategy for a New Century. Washington, DC: The White House, May 1997.
- TRADOC PAMPHLET 525-5. Force XXI Operations: A Concept for the Evolution of Full-Dimensional Operations for the Strategic Army of the Early Twenty-first Century. Fort Monroe, Va.: HQTRS TRADOC, 1 August 1994.
- _____. 525-200-2. Military Operations: Early Entry Lethality and Survivability Battle Dynamics Concept. Fort Monroe, Va.: HQTRS TRADOC, 1 March 1994.

U.S. Army. FM 71-100, Division Operations. Headquarters, Department of the Army, Washington, DC, 1990.

_____. FM 71-100-2, Infantry Division Operations: Tactics, Techniques, and Procedures. Headquarters, Department of the Army, Washington, DC, 1993.

_____. FM 90-26, Airborne Operations. Headquarters, Department of the Army, Washington, DC, 18 December 1990.

_____. FM 90-XX (Draft), Forcible Entry: Multi-Service Procedures for Forcible Entry Operations. October 1993.

_____. FM 100-5, Operations. Headquarters, Department of the Army, Washington, DC, 1993.

_____. FM 100-15, Corps Operations. Headquarters, Department of the Army, Washington, DC, 1989.

Other

Burgess, L.K.. "Haiti Handbook." Director, Marine Corps Intelligence Agency, Detachment Quantico, (1 November 1993), pp. 2-1 through 2-9.

CDR, XVIII Airborne Corps and Fort Bragg, Slide Presentation, "Uphold Democracy," 1994.

82d Airborne Division working papers "IRC Integration." These papers were compiled by the G3 Plans Officer with input from Division's Battle Management Cell (BMC), as a source of the history, planning and lessons learned, from the integration of the 3d Infantry Division's IRC into the 82ds DRB for contingency operations.

82d Airborne Division, Slide Presentation, "How We Fight," 1993.

82d Airborne Division, Slide Presentation, "Operation Just Cause: 82d Airborne Division, 20 DEC 89 – 12 JAN 90," 25 January 1990.